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REMARKS

The Final Office Action mailed November 16, 2006, was received and its contents carefully reviewed. Claims 39, 40, 42-56, 59-61 and 70-74 were pending prior to the Final Office Action.

In the present amendment, Applicants amended claim 70 and 71 to correct minor informalities. Additionally, Applicants amended independent claims 39, 40, 54, 55, 56, 61, 70, 71, and 72 to highlight additional features of the present invention and to add additional context to the claims. The features incorporated in the above amendments are disclosed at least beginning on page 21, line 4 (section 2 of the Specification) and throughout the Specification. As such, Applicants respectfully submit that no new matter was introduced by these amendments.

As now recited, claims 39, 40, 42-56, 59-61 and 70-74 remain pending and are believed to be in condition for allowance. With respect, Applicants request reconsideration of the present application in light of the above amendments and the following remarks.

A. Claim Objections

In the May 5, 2006, Office Action, the Examiner objected to claim 70 because of an informality. In line 17, the claimed "retrial information is failed" should be "retrial information has failed." As indicated above, Applicants amended claim 70 to correct this informality and similarly amended claim 71 as well. Applicants appreciate the Examiner's suggestions for correction and have implemented the suggested change in the above amendments. As such, Applicants respectfully request reconsideration and withdrawal of the objection.

B. Claim Rejections Under 35 U.S.C. § 103

1. Rejections based on the combination of Richards et al. U.S. Patent No. 6,237,146 in view of Gammie et al. U.S. Patent No. 5,270,809

Claims 39, 40, 42, 48-56, 59 and 70-73 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Richards et al. U.S. Patent No. 6,237,146 ("the Richards patent") in view of Gammie et al. U.S. Patent No. 5,270,809 ("the Gammie patent"), both cited by the

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Examiner. In view of the amendments above and the remarks below, Applicants respectfully request reconsideration of these claims and withdrawal of the rejections.

The present invention is generally directed to a data transceiving system including a broadcasting section, television receivers, and response information receiving equipment. With this configuration, the system achieves improved delayed and retrial transmissions between each television receiver and the response information receiving equipment. Specifically, the broadcasting station transmits data to television receivers. Each television receiver then transmits response information to the response information receiving equipment by way of a separate communication line, that is, one that is different than the broadcasting line.

As discussed previously, the Richards patent relates only to delay transmission between the AMI and the DVHT. With additional reference to the Figure 1 of the present application, the system of the present invention includes two separate communication paths as shown in Figure 9. The first communication path connects the broadcasting station to each television receiver. The broadcasting station transmits data to the receivers through the first path irrespective of receiving the data by each receiver. Processing of a delay transmission is not possible and moreover is unnecessary between the broadcasting station and the receivers in that the broadcasting station unilaterally broadcast the data through the first path. The second path is a communication line between each television receiver and the response information receiving equipment. The separate communication line can transmit the data insofar as interactive acknowledgement is made. Accordingly, with the present invention, the broadcasting station transmits the information to the television receivers through the first path for controlling the delayed transmission used in the second path. This is certainly not the case with the Richards patent. These features are highlighted in amended independent claims 39, 40, 54, 55, 56, 61, 70, 71, and 72.

In contrast, the Richards patent has a single communication path between AMI and the DVHT. The system of the Richards patent transmits interactively between the AMI and DVHT and employs a delayed transmission, because there is only a single communication path. Since the AMI needs to communicate with the DVHT's, the delayed transmission between the AMI and each DVHT is indispensable and unavoidable. While the Examiner concedes this fact in the Final Office Action mailed November 16, 2006, the Examiner asserts that the Gammie patent transmits and receives data by a separate communication link.

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However, the telephone network used in the system of the Gammie patent does not provide a separate communication link between the receivers and the response receiving equipment as recited in amended independent claims 39, 40, 54, 55, 56, 61, 70, 71, and 72. The telephone network of the Gammie patent is used to couple a business system for compiling and processing billing information to the integrated receiver-decoder (IRD). See col. 5, lines 18-30. The telephone network of the Gammie patent does not provide a separate communication line from a receiver to response information receiving equipment as recited in the amended claims of the present invention.

As illustrated in Figure 9 of the present application, broadcast unit 140 transmits video and audio to television receivers 160. The television receivers 160 utilize a separate communication line to reach response information receiving equipment 150. The split receiver-response information receiving equipment enables efficient delayed transmissions and retrieval transmissions as the separated components in the receiver and the response information receiving equipment perform portions of the data transceiving method. In the Richards and the Gammie patents, there is no disclosure of this separation between the receiver and response information receiving equipment.

The system of the present invention further includes a manner of calculating transmission scheduling time for the transmission of the second transmission and onwards that is not disclosed by the Richards patent. That is, the system of the present invention includes television receivers that receive determining data for determining initial transmission scheduling time and retrieval information containing a retrieval period transmitted by the broadcasting station. The initial transmission scheduling time is calculated with a random number delay time at each of the receivers using the determining data for determining initial transmission scheduling time. Further, the response information is received via a separate communication line when the initial transmission scheduling time comes. The combination of the Richards patent and the Gammie patent fails to disclose these features of the present invention. These features are highlighted in amended independent claims 39, 40, 54, 55, 56, 61, and 70.

Accordingly, with the system of the present invention, data for determining initial transmission scheduling time from the broadcasting station used for generating random number delays at each receiver and a retrieval period are transmitted at the first transmission.

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Each television receiver that received the transmitted data calculates the initial transmission scheduling time with random number delay times. In carrying out such a process, the present invention achieves a number of benefits, namely, the initial transmission scheduling time can be varied by each of the receivers even when the situation is in a one-to-many relationship such as occurs in broadcasting; the response time for the second transmission and onwards are determined by adding a retrial period for the initial transmission scheduling time. Since the initial transmission scheduling time is calculated with random numbers at each receiver, the response time is varied for the second transmission and onwards. With this configuration, it is possible to reduce processing liability for each receiver, in that each receiver does not need to calculate random numbers except for the initial transmission; and it is necessary to transmit fewer parameters from the broadcast station. The number of parameters in accordance with the present invention is two, for example, the initial transmission scheduling time and the retrial.

Such benefits may not be achieved using the system of the Richards patent or of the Gammie patent. For example, the Richards patent discloses that the AMI 23 calculates each transmission scheduling time, that is, both the initial and the second and later transmission times, with random numbers. The Richards patent also discloses that the initial transmission scheduling time may be calculated by the DVHT (Set-Top-Box) in place of the AMI 23. The Richards patent, however, does not disclose that the initial transmission scheduling time is calculated with random numbers and that the response time for the second and subsequent transmissions are calculated by adding the retrial period to the retrial transmission scheduling time as is specifically recited in the independent claims of the present application.

Instead, the system of the Richards patent must transmit to each receiver the product of the number of parameters to the back-off array multiplied by the number of retry times because the random numbers must be generated by the back-off array for every transmission. This manner of transmitting is cumbersome and incorporates inherent delays in the transmission process. The system of the present invention improves transmissions between each television receiver and the response information receiving equipment by the process outlined in the independent claims of the present application. The Richards patent fails to disclose these features as recited in amended independent claims 39, 40, 54, 55, 56, 61, 70, and 71.

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Similarly, there is no disclosure in the Gammie patent of the initial transmission scheduling time that is calculated with random numbers and that the response time for the second and subsequent transmissions are calculated by adding the retrial period to the retrial transmission scheduling time as is specifically recited in the independent claims of the present application. The Gammie application, instead, is directed to provide a method of recovering billing information in an impulse pay-per-view satellite system. The Gammie application employs a first time period that is fixed during which every remote terminal initiates an attempt to communicate with the central location over the communication network. See col. 3, lines 33-36.

Likewise, additional steps and components in the amended independent claims include further detail regarding the manner in which retrial transmission is calculated and scheduled. There is no disclosure or suggestion in the combination of the Richards patent and the Gammie patent of incorporating altered conditions of retrial transmission in calculating subsequent retrial transmission scheduling time.

As such, Applicants respectfully submit that the combination of the Richards patent and the Gammie patent fail to render amended independent claims 39, 40, 54, 55, 56, 70, 71, and 72 obvious under 35 U.S.C. § 103(a). Applicants respectfully request reconsideration of these independent claims and withdrawal of the rejection of amended independent claims 39, 40, 54, 55, 56, 70, 71, and 72 under 35 U.S.C. § 103(a).

Dependent claims 42, 48-53, 59, and 73 are ultimately dependent upon amended independent claims 40, 56, and 72, respectively and thereby include all the limitations of independent claims 40, 56, and 72, respectively, while reciting additional features of the present invention. As noted above, Applicants amended independent claims 40, 56, and 72, respectively, to include limitations not disclosed by the combination of the Richards patent and the Gammie patent. Accordingly, with the dependency of claims 42, 48-53, 59, and 73 on amended independent claims 40, 56, and 72, respectively, Applicants respectfully submit that these claims are likewise in proper condition for allowance and respectfully request the reconsideration of these claims and the withdrawal of the rejections under 35 U.S.C. § 103.

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2. Rejections based on the combination of "the Richards patent" in view of "the Gammie patent" and in further view of Corrigan et al. U.S. Patent No. 5,966,636.

Claims 43, 47, 60 and 74 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over Richards et al. in view of Gammie et al. in further view of Corrigan et al. (U.S. Patent No. 5,966,636), all cited by the Examiner. In view of the amendments above and the comments below, Applicants respectfully request reconsideration and withdrawal of this rejection.

As outlined above, dependent claims 43 and 47 similarly depend upon amended independent claim 40, while dependent claim 60 depends upon amended independent claim 56, and dependent claim 74 depends upon amended independent claim 72. Therefore, these dependent claims include all the limitations of independent claims 40, 56, and 72 respectively, while reciting additional features of the present invention. As noted above, Applicants amended independent claims 40, 56, and 72 to include limitations not disclosed by the combination of the Richards patent and the Gammie patent. Likewise, the Corrigan patent also fails to disclose or suggest the recited features in amended independent claims 40, 56, and 72, respectively.

For example, in addition to failing to disclose or suggest the separate communication line or the calculation of initial transmission scheduling time with a random number delay time, the Corrigan patent fails to disclose or suggest altering the conditions of retrieval transmission based on the subsequent retrieval transmission scheduling time and calculating retrieval transmission scheduling time by adding the retrieval period to the retrieval transmission scheduling time.

Accordingly, with the dependency of claims 43 and 47 upon amended independent claim 40, the dependency of claim 60 upon amended independent claim 56, and the dependency of claim 74 upon amended independent claim 72, Applicants respectfully submit that the combination of the Richards patent, the Gammie patent, and the Corrigan patent fails to disclose or suggest the recited features and that these claims are likewise in proper condition for allowance. Applicants respectfully request the reconsideration of these claims and the withdrawal of the rejection under 35 U.S.C. § 103.

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3. Rejections based on the combination of "the Richards patent" in view of "the Gammie patent" in further view of "the Corrigan patent" in further view of Lowell U.S. Patent No. 6,012,086.

Claims 44-46 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over Richards et al. in view of Gammie et al., in view of Corrigan et al., and in further view of Lowell (U.S. Patent No. 6,012,086), all cited by the Examiner.

Also, claims 44-46 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Richards et al. U.S. Patent Number 6,237,146 (the '146 patent) in view of Corrigan et al. U.S. Patent Number 5,966,636 (the '636 patent) in further view of Lowell U.S. Patent Number 6,012,086 (the '086 patent). In view of the amendments above and the comments below, Applicants respectfully request reconsideration and withdrawal of this rejection.

As outlined above, dependent claims 44-46 ultimately depend upon amended independent claim 40. Therefore, these dependent claims include all the limitations of independent claim 40, while reciting additional features of the present invention. As noted above, Applicants amended independent claim 40 to include limitations not disclosed by the combination of the Richards patent and the Corrigan patent. Similarly, the Lowell patent fails to cure the deficiencies of the Richards and Corrigan patents, namely the features recited in the amended independent claims directed to the separate communication lines and the calculation of the initial transmission scheduling time with a random number at each of the receivers. Accordingly, with the dependency of claims 44-46 on amended independent claim 40, Applicants respectfully submit that the combination of the Richards patent, the Corrigan patent, and the Lowell patent fails to disclose the recited features and that these claims are likewise in proper condition for allowance. Applicants respectfully request the reconsideration of these claims and the withdrawal of the rejection under 35 U.S.C. § 103.

4. Rejections based on the combination of "the Gammie patent" in view of "the Richards patent"

Claim 61 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over Gammie et al. U.S. Patent Number 5,270,809 (the Gammie patent) in view of Richards et al. U.S. Patent Number 6,237,146 (the Richards patent). In view of the amendments above and the comments below, Applicants respectfully request reconsideration and withdrawal of this rejection.

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The present invention is generally directed to a data transceiving system including a broadcasting section, television receivers, and response information receiving equipment. With this configuration, the system achieves improved delayed transmission between each television receiver and the response information receiving equipment. Specifically with regard to claim 61, the receiver transmits response information to the response information receiving equipment by way of a separate communication line, that is, one that is different than the broadcasting line. Additionally, the receiver calculates the initial transmission scheduling time with a random number at each receiver using the determining data for determining initial transmission scheduling time. These features are not disclosed by the combination of the Gammie patent and the Richards patent.

As discussed previously, the Richards patent relates only to delay transmission between the AMI and the DVHT. With reference to the Figure 1, the system of the present invention includes two separate communication paths. The first communication path connects the broadcasting station to each television receiver. The broadcasting station transmits data to the receivers through the first path irrespective of receiving the data by each receiver. Processing of a delay transmission is not possible and moreover is unnecessary between the broadcasting station and the receivers in that the broadcasting station unilaterally broadcast the data through the first path. The second path is a communication line between each television receiver and the response information receiving equipment. The separate communication line can transmit the data insofar as interactive acknowledgement is made. Accordingly, with the present invention, the broadcasting station transmits the information to the television receivers through the first path for controlling the delayed transmission used in the second path. This is clearly not the case with the Richards patent and the Gammie patent fails to disclose these features as well. These features are highlighted in amended independent claim 61.

As such, Applicants respectfully request reconsideration of amended independent claim 61 and withdrawal of the rejection under 35 U.S.C. § 103(a).

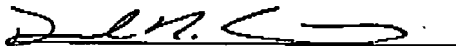
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C. Conclusion

In view of the above amendments and remarks, Applicants respectfully request reconsideration of this application and the timely allowance of the pending claims. If the Examiner believes a conference would be of benefit in expediting the prosecution of the present application, please telephone Applicants' counsel to arrange such a conference.

Respectfully submitted,


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